

REMARKS

This Amendment is in response to the Office Action of March 10, 2005 in which claims 1-23 were rejected. With this Amendment, claims 1-16, 19-23 23 are amended. In addition, the first paragraph on page 8 of the Specification and the Abstract have been corrected. Claims 1-23, as amended are presented for reconsideration and allowance.

In paragraph 1 of the Office Action, the Declaration was stated to be defective because the faxed Declaration submitted was missing a page listing one of the inventors (Declan Macken). Four copies of a Supplemental Declaration (one signed by each inventor) are submitted concurrently with this Amendment to cure the defect.

In paragraph 2 of the Office Action, the Abstract was objected to. The document ID at the bottom of the Abstract has been removed by this Amendment.

In paragraph 7 of the Office Action, claims 1-23 were rejected under 35 U.S.C. § 112, first paragraph. With the Amendment to the claims, the nanophase magnetic material is now stated as incorporating nanoclusters and having a magnetic saturation moment of greater than 2.4 T. The term "high magnetic moment" has been removed by amendment of the claims. As a result, the rejection under 35 U.S.C. § 112, first paragraph has been overcome, and should be withdrawn.

In paragraphs 9-13 of the Office Action, claims 1-23 were rejected under 35 U.S.C. § 112, second paragraph. With the amendments to the claims, each of the bases stated in paragraphs 10-13 have been addressed. In particular, the term "high" has been removed from the claims, which now require a magnetic saturation moment of greater than 2.4 T.

The amendment to claim 1, as well as dependent claims 2-13 to change "magnetic write element" to "magnetic element." This addresses the issue raised in paragraph 11 of the Office Action.

Claim 16 has been amended to depend from claim 15, and claims 22 and 23 have been amended to depend from claim 20. This addresses the issues raised in paragraphs 12 and 13 of the Office Action.

As a result of the amendments to the claims, the rejection under 35 U.S.C. § 112, second paragraph has been overcome, and should be withdrawn.

In paragraph 15 of the Office Action, claims 1-8, 11 and 12 were rejected under 35 U.S.C. § 102(e) as being anticipated by Funayama et al. With this Amendment, the rejection based upon Funayama et al. has been overcome. Funayama et al. does not teach a magnetic element comprising at least one layer of nanophase magnetic material incorporating nanoclusters and having a magnetic saturation moment of greater than 2.4 T. As a result, it does not anticipate independent claim 1 or any of dependent claims 2-8, 11 or 12. The rejection under 35 U.S.C. § 102(e) based upon Funayama et al. should be withdrawn.

In paragraph 17 of the Office Action, claims 14-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Funayama et al. in view of Lam. Neither of these references teach or suggest the transducing head defined in claims 14-21. In particular, neither Funayama et al. nor Lam teaches a magnetic write element having first and second magnetic layers as defined in claim 14, which include nanophase magnetic material incorporating nanoclusters and having a magnetic saturation moment of greater than 2.4 T. It should be noted that the nanoclusters of the present invention enhance the magnetic saturation moment above that of the bulk material from which they are derived. There is no suggestion by Funayama et al. or Lam of such unique properties of layers used in a write element. The rejection of claims 14-21 should be withdrawn.

In paragraph 18 of the Office Action, claims 1-6, 12 and 14-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lam in view of Zhang et al. As noted in the Office Action, Lam fails to disclose a nanophase high magnetic moment material as part of the top and bottom poles. With the amendment to the claims, the characteristics of the nanophase material have been clarified. Neither Lam nor Zhang et al. suggests a magnetic element which incorporates at least one layer of a nanophase magnetic material incorporating nanoclusters and having a magnetic saturation moment of greater than 2.4

T. General statements in Zhang et al. relating to "excellent" properties or performance does not teach the present invention. The rejection of claims 1-6, 12 and 14-19 should be withdrawn.

In paragraph 19 of the Office Action, claims 7-11 and 20-23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lam in view of Zhang et al. and further in view of Sun et al. However, Sun et al. does not supply the teaching missing from Lam and Zhang et al., as discussed above. The present invention, is defined in an ended claims 7-11 and 20-23, is not taught or suggested by Lam, Zhang et al., or Sun et al., either alone or in combination. The rejection of claim 7-11 and 20-23 should be withdrawn.

In conclusion, this Amendment has placed the application in condition for allowance. Notice to that effect is requested.

Respectfully submitted,

KINNEY & LANGE, P.A.

Date:

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By:



David R. Fairbairn, Reg. No. 26,047

THE KINNEY & LANGE BUILDING

312 South Third Street

Minneapolis, MN 55415-1002

Telephone: (612) 339-1863

Fax: (612) 339-6580

DRF:ks